



## Continuing Education

# Are Interventions for Informed, Efficacious Precontemplators Unethical?

John Sciacca, Dixie L. Dennis, and David R. Black

### ABSTRACT

*Examined in this article is whether it is ethical for health educators to try to change the health behaviors of people who are informed about the risks of engaging in an unhealthy behavior, have the skills and confidence to change the behavior, but nevertheless choose not to change. Questions are raised about whether interventions for such precontemplators are manipulative and incompatible with the ethical principle of individual autonomy and whether health educators who attempt to change the behaviors of these precontemplators violate the Code of Ethics for the Health Education Profession. The article concludes with the argument that health educators violate the Code of Ethics if they knowingly subject informed, efficacious people who have decided not to change to interventions designed to promote change.*

Many health educators are faced with the responsibility to help change at-risk behaviors of individuals. For example, Georges Benjamin, MD, executive director of the American Public Health Association, noted that it is the responsibility of the nation's public health workforce, which includes health educators, to find ways to address lifestyle behaviors directly linked to chronic diseases to "improve the health and lives of all Americans" (APHA Annual Meeting, 2003, p. 1). Although health educators use various interventions to help change people's behavioral risk factors, inadequate discussion has occurred about whether application of commonly used strategies to promote risk reduction behaviors is ethical to use with all adults.

The issue addressed in this article is

whether, according to the *Code of Ethics for the Health Education Profession* (Coalition of National Health Education Organizations [CNHEO], 1999, referred to hereafter as the *Code of Ethics*), it is ethical for health educators to try to change people who are informed about the risks of engaging in an unhealthy behavior, have the skills and confidence to successfully change that behavior, but nevertheless choose not to change. Not addressed are questions about the ethics of the public, government, or private sector influencing individuals whose behaviors may have a negative effect on others and lead to a burden, financially or otherwise, such as smoking, secondary smoke, and hospitalization and/or premature death. Specifically, questions are raised in this article about whether interventions

for such precontemplators are manipulative and incompatible with the ethical principle of individual autonomy, and whether health professionals who attempt to change

---

*John Sciacca, MPH, PhD, is professor and chair of the Department of Health Promotion at Northern Arizona University, Box 15095, Flagstaff, AZ 86011; E-mail: John.Sciacca@nau.edu. Dixie L. Dennis, PhD, CHES, FRIPH, is an associate professor and research coordinator at the University of Maryland Eastern Shore, Princess Anne, Md. David R. Black, PhD, MPH, HSPP, CHES, CPPE, FSBM, FASHA, FAAHB, is professor of health promotion; health sciences; foods and nutrition; and nursing in the Department of Health and Kinesiology at Purdue University in West Lafayette, Ind.*



behaviors of these precontemplators violate the *Code of Ethics*. Discussions are confined to adults who are presumed capable of making decisions regarding changing health-related behaviors.

### **HEALTH EDUCATORS' LONG-TIME INTEREST IN ETHICS**

Ethics is a branch of philosophy that deals with determining whether an action is moral or immoral (Gold & Greenberg, 1992). The health education profession has a long tradition of attending to issues related to ethical practice. For many years prior to the current *Code of Ethics* health educators were concerned about ethical behavior toward clients, including the clients' rights to decide matters for themselves. For example, Shirreffs and Vitello (1984) reported that in the early 1950s Kleinschmidt and Zimand (1953) believed that health educators should seriously consider what they were "doing to the minds" of people when trying to influence them. Approximately 30 years later, Robert Russell and Don Read engaged in a series of debates regarding the rightness and wrongness, in general, of health educators promoting health behavior change (Eberst, 1985).

### **THE HEALTH EDUCATION CODE OF ETHICS**

Codes of ethics typically prescribe standards, state principles, express responsibilities, and/or define rules expressing duties of professionals to whom they apply (Gold & Greenberg, 1992). A code of ethics prescribes what professionals should and should not do in their professional endeavors. Specific to health education, the *Code of Ethics* communicates the principles that should govern health educators' professional conduct. The *Code of Ethics* presents a framework of shared values within which health education is practiced. Article I in this *Code of Ethics*, "Responsibility to the Public," directs health educators to act ethically toward individuals while giving priority to principles of self-determination and individual freedom of choice. Article I, introduction and Section 1, reads:

A Health Educator's ultimate responsibility is to educate people for the purpose of promoting, maintaining, and improving individual, family, and community health. When a conflict of issues arises among individuals, groups, organizations, agencies, or institutions, health educators must consider all issues and give priority to those that promote wellness and quality of living through principles of self-determination and freedom of choice for the individual.

Section 1: Health educators support the right of individuals to make informed decisions regarding health, as long as such decisions pose no threat to the health of others. (p.2)

It can be argued that almost every behavior could pose a threat to the health of others. For example, eating a donut every day could not only increase an individual's risk of disease, but also threaten the psychological and social health of family members and negatively impact the financial health of those that finance the health care system. The same argument could be used for engaging in a sport, such as downhill skiing, that increases the risk of injury. According to Article I, the principle of self-determination and freedom of choice can be sacrificed when an individual's behavior poses a threat to the health of others. The authors make the assumption that, given the importance that the *Code of Ethics* places on self-determination and freedom of choice, not all behaviors that affect the health of an individual are considered to pose a threat to the health of others. Furthermore, the authors make the assumption that "financial health" is not a consideration in the *Code of Ethics* statement: "as long as such decisions pose no threat to the health of others." Questioned, therefore, is the extent to which it is ethically justifiable for a health educator to persist in trying to change an adult who is aware of the risks of an unhealthy behavior, capable of changing the unhealthy behavior, yet uninterested in changing a behavior that is not harmful to others.

### **ETHICAL CONCERNs OVER STAGES-OF-CHANGE MODELS OF BEHAVIOR CHANGE**

Health education specialists frequently have used stage-based models as a structured way to modify human behavior (Prochaska, Redding, & Evers, 2002). Concerns about ethics specifically related to stage-based models of behavior change have previously been raised. For example, Duncan and Cribb (1996) evaluated the ethics of Helping People Change (HPC), a United Kingdom Health Education Authority stage-of-change based intervention designed for delivery by primary healthcare professionals. These evaluators discussed the ethics of healthcare professionals providing precontemplators with smoking risk and nonsmoking benefit information over several visits assuming that with repeated exposure to education, a precontemplator would begin to actively consider changing his/her behavior (i.e., becoming a contemplator).

Duncan and Cribb (1996) applied the four ethical principles of nonmaleficence, beneficence, justice, and respect for autonomy in their ethical analysis of HPC. Nonmaleficence refers to causing no harm. Beneficence refers to removing harm and promoting good. Justice refers to doing to clients only what is fair or just. Respect for autonomy, also known as self-determination and liberty, refers to the belief that all competent individuals have an intrinsic right to make their own decisions, as long as their decisions do not harm others (Duncan & Cribb; Gold & Greenberg, 1992; Hiller, 1987; Torabi, 1994).

Duncan and Cribb (1996) concluded that the HPC stages-of-change based health education intervention was obviously questionable and fared rather badly with regard to these key ethical principles. For example, they argued that the HPC intervention could cause considerable psychological harm if an individual who received the intervention was unable to change an at-risk behavior or maintain that change. Being unable to change a health behavior when guided to do so may result



in self-degradation. Furthermore, they noted the limited effectiveness of individual behavior change programs and questioned whether HPC is "just" if resources that could be more effectively used elsewhere are used to support such relatively ineffective interventions. Finally, Duncan and Cribb expressed concern that HPC may not be autonomy respecting.

### ETHICAL CONCERN OVER TRANSTHEORETICAL MODEL-BASED INTERVENTIONS FOR PRECONTEMPLATORS

The transtheoretical model (i.e., "stages of change" model), developed by Prochaska and Di Clemente (1992), is a widely used stage-based model for promoting healthy behavior change (Prochaska et al., 2002). This model has been applied to a broad range of behaviors including, but not limited to, alcohol and substance abuse; eating disorders; obesity; high fat diets; HIV/AIDS prevention; mammography screening; medication compliance; unplanned pregnancy prevention; smoking; sedentary lifestyle; and sun exposure (Prochaska et al.). The stages-of-change model (Prochaska & Di Clemente) depicts behavior change as a process that can be mapped as five distinct stages (precontemplation, contemplation, preparation, action, and maintenance). A tenet of the model is that a person could be at any one of the stages of readiness to change a health behavior and will remain at that stage until something or someone motivates him or her to move to the next stage.

A person in the precontemplation stage of change is presumed to be uninterested in and to have no intention of changing a health-related behavior. Precontemplators are frequently characterized as resistant and unmotivated individuals who tend to remain "stuck" in their unmotivated state without an intervention (Prochaska & Velicer, 1997). Prochaska and Velicer believe that the future of health promotion programs lies with health educators helping all precontemplators progress rather than responding only to precontemplators who

specifically requested help to progress.

Different reasons exist regarding why a person could be in the precontemplation stage. For example, a person may lack awareness of the risks of his/her behavior. Other reasons include a person lacking the confidence and skills to attempt to change or believing that his or her physical and social environment will not provide support for a healthy behavior change. Some precontemplators, however, are informed about the risks of their unhealthy behavior and believe that they have the skills and confidence to change that risk behavior, but they do not want to change. This type of precontemplator may say, "Smoking is something I like to do, and I could quit if I really wanted to, but I don't want to do so;" or "I know that an inactive lifestyle puts me at greater risk of disease, but I accept that risk. I really don't want to exercise and have no intention of doing so"; or "I know eating a lot of fried food is bad for me, but I enjoy the taste so much I plan to continue to eat these foods." Just as some people may not want to be called by telemarketers about goods or services that may help them, these precontemplators may not want to hear educational messages designed to motivate them to start thinking about changing a health risk behavior that they already have decided not to change. Yet interventions by health educators to help motivate precontemplators to change are common.

Prochaska and Velicer (1997) described three interventions that they believe are appropriate to help move people from the precontemplative stage. These three processes—consciousness raising, dramatic relief, and environmental reevaluation—were designed for implementation with all precontemplators, including the efficacious precontemplator who is aware of his/her risky behavior(s) but nevertheless has no interest in or intention of changing.

The first intervention technique in Prochaska's and Velicer's (1997) processes of change for precontemplators is consciousness-raising. Consciousness-raising involves increasing precontemplators' awareness about the causes, consequences,

and cures for a particular problem behavior. The efficacious "aware of/accepts-risk" precontemplator, however, may already be aware of the causes, consequences, and cures of his/her risky behavior. Therefore, can using this type of intervention, which may focus on repeated education, confrontation, and other persuasive communications, be unethical when applied to this type of precontemplator?

Dramatic relief is the second intervention for precontemplators addressed by Prochaska and Velicer (1997). Dramatic relief was designed to produce increased emotional reactions in people, followed by taking away the "emotional producer" when the precontemplator expresses a desire to change. Examples of emotional producers include having precontemplators role play an emotional event or have them listen to an emotionally arousing personal testimony from someone who has "been there." Can this process cause emotional/psychological or other types of harm and, again, is it unethical to utilize this approach on someone who is aware of risks but has expressed his/her desire to continue the behavior?

The third intervention in Prochaska's and Velicer's (1997) precontemplative processes of change is environmental reevaluation. Environmental reevaluation refers to providing precontemplators with an awareness of the impact that an unhealthy behavior may have on others. For example, this intervention may include emotionally arousing communications to a father that his smoking may be causing his daughter's asthma to worsen. Or the intervention could involve communicating that failure to use a condom may place a partner at risk of becoming infected with HIV and emotionally or financially harm his/her family. However, if this technique is used to emotionally arouse a person whose behavior is not clearly posing a threat to the health of others (for example, communicating that a husband's inactive lifestyle may cause him to die prematurely and leave his family in a difficult situation), is it incompatible with the principle of respect for individual autonomy? And is this technique unethical



when used on the population addressed in this article? Could using this environmental reevaluation technique be described as an attempt to psychologically manipulate a precontemplator's right to self-determination and freedom of choice when his/her behavior is not harming others?

### **INTERVENTIONS MOST AND LEAST COMPATIBLE WITH THE PRINCIPLE OF AUTONOMY**

In her article "Ethical Issues in Government Sponsored Public Health Campaigns," Faden (1987) explained the relationship between warrants for using a health campaign and the extent to which it is morally acceptable for the campaign to violate the principle of respect for autonomy. She indicated that if there is sound justification for the need for public health interventions to, for example, control influenza outbreaks (perhaps because of a combination of public health, cost containment, and "harm to others" arguments), one would be inclined to view relatively slight violations of respect for autonomy as ethically acceptable. If it is believed, however, that there was only minimal justification for an intervention to control the outbreak, one might consider using only interventions that were fully respectful of individual autonomy as ethically acceptable.

Faden (1987) further presented characteristics or criteria to distinguish forms of influence on a person from those that are and are not compatible with the principle of respect for individual autonomy. She grouped influence strategies into three categories—persuasion, manipulation, and coercion—and placed them respectively on a continuum from most compatible to least compatible. Faden defined persuasion as "the intentional and successful attempt to induce a person(s), through appeals to reason, to freely accept—as his or her own—the beliefs, attitudes values, intentions or actions advocated by the influence agent" (p. 30). With persuasion, the influence agent must bring to the persuadee's attention the reasons for him or her to accept the message/recommendations.

Faden (1987) explained that manipulation of information is less compatible with the ethical principle of autonomy of the individual. Examples of manipulation of information include lying, withholding information, and misleading exaggeration. Other examples include intentionally provoking or taking advantage by fear, anxiety, pain, or other states known to compromise a person's ability to process information effectively. Psychological manipulation includes any intentional act that influences change through processes other than those involved in understanding. Included in this category are such strategies as flattery and other appeals to emotional weaknesses as well as inducing guilt or feelings of obligation to influence a person to change. Interventions to help move precontemplators to the contemplation stage are less compatible with the principle of respect for autonomy and freedom of choice when they involve manipulation of information and psychological manipulation.

Coercive strategies, according to Faden (1987), are the least compatible with the principle of individual autonomy. Coercive efforts to prevent driving under the influence of alcohol are ethically justifiable according to the *Code of Ethics*, because driving under the influence poses a clear threat to the health of others. Conversely, as suggested by the *Code of Ethics*, efforts to compel a behavioral "choice" when the current behavior poses little or no harm to others may not be autonomy-respecting (efforts to help, encourage, guide, or get an individual who, for example, prefers whole milk to switch to low fat milk, may be an example of such).

### **SHOULD AN INDIVIDUAL'S DECISION TO ENGAGE IN A RISK BEHAVIOR BE RESPECTED?**

Pellegrino (1981) wrote about the choice among several good things, which include cure and prevention, personal freedom, and social and economic welfare of the nation. He argued that when lifestyles result in disease, disability, and death with economic consequences damaging to the whole of

society, and completely voluntary measures promise to be ineffective for the good of all, measures to enforce personal compliance are justified. He argued that, with respect to health promotion, there are two preeminent questions to be considered when deciding whether a proposed modification of personal behavior is morally defensible. The first question is, "How good is the causal connection between the behavior and a health problem?" Second, "Does the proposed intervention to modify the risk behavior actually do so?"

Pellegrino (1981) contended that coercive strategies are morally justified when the behavior in question is related to health, the coercive measures promise to be highly effective, and when completely voluntary measures are not effective in bringing about behavior change. An alternative view is voiced by Gold and Greenberg (1992) who believed that manipulating or controlling others is unacceptable:

That is, the goal of health education is not to manipulate people to behave in any predetermined ways—ways that we term "healthy"—since health is multifaceted and any behavior that might be beneficial to one component of health might be detrimental to other components. In fact, when health educators teach people to be "controllable" (that is, able to be manipulated to behave in ways that another wants them to behave—even if the other is a health educator with good intent) they are doing these program participants a disservice (pp. 71–72).

This "hands-off" approach for health educators may be warranted even if all of a precontemplator's health dimensions are negatively affected by his/her behaviors. For example, consider the overweight (physical), divorced (emotional), loner (social) who believes (mental) that his or her otherwise meaningless life (spiritual) is made more tolerable by eating a lot of food and watching television each night. Suppose this precontemplator is informed about all of the health risks and is confident that he or she can make changes but wants life as it



is. We agree that a person could make an informed decision to maintain a behavior that places his or her health at risk, and that this decision should be respected.

## EXAMPLES OF INTERVENTIONS FOR ALL TYPES OF PRECONTEMPLATORS

Less than a decade ago, the Agency for Health Care Policy and Research (later renamed the Agency for Healthcare Research and Quality) published guidelines to assist clinicians, smoking cessation specialists, and healthcare administrators/purchasers/insurers in supporting and delivering effective smoking cessation interventions (Fiore, Bailey, Cohen et al., 1996). The guidelines included the following.

- Advise all smokers, at every office visit, to quit smoking and encourage clinic staff to reinforce the cessation message.
- If the patient clearly states that he/she is not willing to make a quit attempt at this time, provide a motivational intervention. The intervention for precontemplators is designed to promote motivation to quit.

These guidelines recommended interventions for all precontemplators, including those who are informed, efficacious, and yet still decided that they are not interested in change. Health educators have taught these guidelines to health professionals for implementation in healthcare settings (Muramoto et al., 2000).

Recently, similar guidelines have been proposed in an effort to reduce obesity and sedentary lifestyles. Manson, Skerrett, Greenland, and VanItallie (2004) provided guidelines to physicians and other healthcare professionals urging them to discuss fitness and activity levels with every patient at every visit and to tell all overweight patients about the dangers of being overweight or obese, the hazards of inactivity, and the benefits of physical activity. These authors stated, "Implicit in this model is the reality that patients may need to hear a particular message several times before it, or something else in their lives, prompts them to action" (p. 256).

These guidelines, when used by health

educators, are ethically suspect and may violate the *Code of Ethics* when they are applied to the population addressed in this article. Through the *Code of Ethics*, health educators read that they are required to be committed to the principle of individual choice. To paraphrase Greenberg and Gold (1992), the *Code of Ethics* is clear that individuals have the right to free choice if their behavior does not pose a threat to the health of others. For capable adults who are informed of the risks of an unhealthy behavior, that right should be respected.

## WHO SHOULD DECIDE WHAT BEHAVIOR IS THE RIGHT CHOICE?

Freudenberg and colleagues (1995) noted that most theories used in health education emphasize the role of the health educator rather than the client in bringing about change. Generally, the health educator who defines the goals of change along with the methods to achieve those goals. Such theories and models of behavior change often reflect the assumption that health professionals know what is best for others and that individuals who do not behave in a "correct way" need to be helped to change.

John Allegante (National Commission for Health Education Credentialing, 1996) agreed that health educators should not decide how individuals should behave. He stated:

Health education is eminently committed to enabling an empowered role for people to define their problems, set their priorities and create practical solutions by which they achieve a sense of interest in, commitment to and possess ownership of the efforts used to address health issues. Health education respects the individual as an actively involved learner and a full partner in the change process who is learning to act on, respond to, and improve his or her environment (p. 2).

Like Freudenberg et al. (1995) and Allegante (National Commission for Health Education Credentialing, 1996), Gold and Greenberg (1992) raised a ques-

tion concerning who should determine what constitutes proper health behavior for another person. Should the health educator decide the right behavior? Or as articulated by health education pioneer Dorothy Nyswander (1956), as discussed by Minkler and Wallerstein (2003), should health educators restrict themselves to "starting where people are?" "Starting where people are" has relevance to this article in ensuring that individuals, not the health educator, decide which, if any, behaviors to change.

## SUMMARY AND CONCLUSION

Do repeated attempts to convince, persuade, educate, guide, or otherwise help a person who is uninterested in, for example, beginning an exercise program or changing a diet, violate the principle of self-determination and freedom of choice for the individual? The argument presented in this article is that health educators violate the *Code of Ethics* if they knowingly subject informed efficacious people who have decided not to change to interventions designed to promote change.

That is not to say that a health educator should not attempt to educate a precontemplator to consider change. Asking a precontemplator, "Are you open to hearing information about the potentially negative risks of your behavior and how changing your behavior can reduce risks?" is appropriate. Educating poorly informed precontemplators and assisting those who lack confidence in their ability to change are important health promotion efforts and clearly compatible with the *Code of Ethics*. Problems arise when interventions are conducted in an effort to change an already-informed competent adult who does not want to change. Furthermore, when interventions designed to invoke fear, anxiety, guilt, or feelings of obligation to change are used, psychological manipulation appears apparent and the principle of autonomy may be further compromised.

When an individual has "heard" the message and understands the message, (i.e., he or she has been "informed"), but remains



not interested in change (assuming their behaviors do not threaten the health of others), the influence attempt should end. The *Code of Ethics* clearly suggests that it is unethical to continue to subject that person to interventions designed to bring about change. If the health education profession believes that it is ethical for health educators to engage in repeated efforts to change unhealthy behaviors of adults, including those who are informed and efficacious, who do not want to change, and whose behaviors do not threaten the health of others, then the *Code of Ethics* needs to be changed. Until such time, the *Code of Ethics* clearly prescribes that health educators should support the right of individuals to make informed decisions regarding their health and quality of living through principles of self-determination and freedom of choice.

## REFERENCES

- American Public Health Association Annual Meeting. (2003, November). *Nation's Health*, pp. 1, 4.
- Coalition of National Health Education Organizations (CNHEO). (1999). *Code of ethics for the health education profession*. Retrieved May, 19, 2004, from <http://www.med.usf.edu/CFH/cnheo/ethics.htm>.
- Duncan, P., & Cribb, A. (1996) Helping People Change—an ethical approach? *Health Education Research: Theory and Practice*, 11, 339–348.
- Eberst, R. M. (Ed.). (1985). Is behavior change an acceptable objective for health educators? *Eta Sigma Gamma*, 4(1), 17–62.
- Faden, R. R. (1987). Ethical issues in government sponsored public health campaigns. *Health Education Quarterly*, 14, 27–37.
- Fiore, M. C., Bailey, W., Cohen, S. J., et al. (1996). *Smoking cessation: Clinical practice guideline number 18* (AHCPR Publication # 96-0692). Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research.
- Freudenberg, N., Eng, E., Flay, B., Parcel, G., Roberts, T., & Wallerstein, N. (1995). Strengthening individual and community capacity to prevent disease and promote health: In search of relevant theories and principles. *Health Education Quarterly*, 22, 290–306.
- Gold, R. S., & Greenberg, J.S. (1992). *The health education ethics book*. College Park, MD: WC Brown.
- Hiller, M. D. (1987) Ethics and health education: Issues in theory and practice. In P. M. Lazas, L. H. Kaplan, & K. A. Gordon (Eds.), *The handbook of health education* (2nd ed., pp. 87–108). Rockville, MD: Aspen.
- Kleinschmidt, H., & Zimand, S. (1953). *Public health education—its tools and procedures*. New York: Macmillan.
- Manson, J. E., Skerrett, M. S., Greenland, P., & VanItallie, T. B. (2004). The escalating pandemics of obesity and sedentary lifestyle. *Archives of Internal Medicine*, 164, 249–257.
- Minkler, M., & Wallerstein, N. (2003). Community-based participatory research for health. In M. Minkler & T. Hancock (Eds.), *Community-driven identification and issue selection* (pp. 135–154), San Francisco: Jossey-Bass.
- Muramoto, M. L., Connolly, T., Strayer, L. J., Ranger-Moore, J., Blatt, W., Leischow, R., & Leischow, S. (2000). Tobacco cessation skills certification in Arizona: Application of a state wide, community based model for diffusion of evidence based practice guidelines. *Tobacco Control*, 9, 408–414.
- National Commission for Health Education Credentialing, Inc. (1996). *A competency-based framework for professional development of certified health education specialists*. Allentown, PA: Author.
- Nyswander, D. (1956). Education for health: Some principles and their application. *California Health*, 14, 65–70.
- Pellegrino, E. D. (1981). Health promotion as public policy: The need for moral grounding? *Preventive Medicine*, 10, 371–378.
- Prochaska, J. O., & Di Clemente, C. C. (1992). Stages of change in the modification of problem behaviors. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), *Progress in behavior modification* (pp. 184–218). Sycamore, IL: Sycamore Press.
- Prochaska, J. O., Redding, C. A., & Evers, K. E. (2002). The transtheoretical model and stages of change. In K. Glanz, B. Rimer, & M. Lewis (Eds.), *Health behavior and health education: Theory, research and practice* (3rd ed., pp. 99–120). San Francisco: Jossey-Bass.
- Prochaska, J. O. & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion*, 12, 38–48.
- Shirreffs, J. H., & Vitello, E. M. (1984). *An exploratory survey of ethical problems in health education*. Unpublished manuscript.
- Torabi, M. R. (1994). Fundamental principles of ethical research in health science education. *Eta Sigma Gamma*, 12, 2–17.